

Missouri Department of Natural Resources

## Total Maximum Daily Load Information Sheet

### Stockton Branch

---

#### Waterbody Segment at a Glance:

**County:** Cedar  
**Nearby Cities:** Stockton  
**Length of impairment:** 1.7 miles  
**Pollutant:** Volatile Suspended Solids (VSS)  
**Source:** Stockton Wastewater Treatment Plant (WWTP)



State map showing location of watershed

**TMDL Priority Ranking:** Permit-in-Lieu of a TMDL accepted by EPA

---

#### Description of the Problem

##### Beneficial uses of Stockton Branch

- Livestock and Wildlife Watering
- Protection of Warm Water Aquatic Life
- Protection of Human Health associated with Fish Consumption

##### Use that is impaired

- Protection of Warm Water Aquatic Life

##### Standards that apply

- Standards for Volatile Suspended Solids may be found in the general criteria section of the WQS, 10 CSR 20-7.031(3)(A) and (C) where it states:
  - Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses.
  - Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses.

#### Background Information

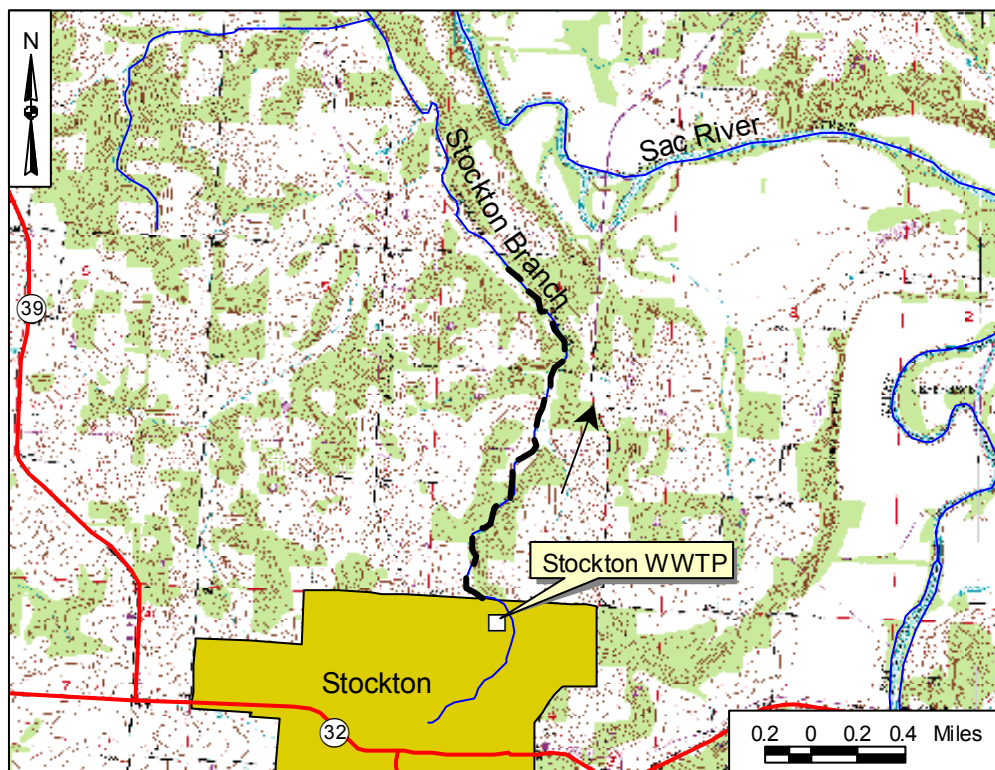
Any waterbody that was listed for Non-Filterable Residue (NFR) in 1998, like Stockton Branch, is now being listed as Volatile Suspended Solids (VSS). This change was made to better distinguish between organic solids coming from wastewater treatment plants (VSS) and mineral solids (soil or mineral particles) coming from soil erosion or erosion of mine waste materials or stockpiles (Non-Volatile Suspended Solids or NVSS).

Stockton Branch shows excessive suspended algae, excessive deposition of solids and reduced diversity of aquatic invertebrates (like crayfish and water insects) downstream from the Stockton

Wastewater Treatment Plant (WWTP). VSS refer to particles that are suspended in water, like algae, or those that settle out, like sewage sludge. Suspended algae are a problem. Besides being unsightly and smelly, they block sunlight in the stream and reduce dissolved oxygen in the water. Many aquatic organisms require high levels of oxygen to survive. In addition, VSS can settle onto the streambed where they smother natural substrates (stream bottom), aquatic invertebrate animals (like crayfish and water insects) and fish eggs.

Like all wastewater discharges in Missouri, the Stockton WWTP has to meet the requirements of a discharge permit issued by Missouri Department of Natural Resources. The city upgraded their wastewater treatment program in 2002-3, but part of their new construction was destroyed by a tornado that struck Stockton in the spring of 2003. The city had to reconstruct the damaged parts and their “new” operating permit was reissued March 10, 2005. This permit includes a compliance schedule, which commenced June 1, 2005 and concludes June 1, 2008. The Environmental Protection Agency accepted the permit in lieu of a TMDL on June 16, 2005.

### Stockton Branch in Cedar County, Missouri



— — — — — Impaired Segment      —————> Direction of Flow

#### For more information call or write:

Missouri Department of Natural Resources, Water Protection Program  
P.O. Box 176, Jefferson City, MO 65102-0176  
1-800-361-4827 or (573) 751-1300 office or (573) 526-5797 fax  
Program Home Page: [www.dnr.mo.gov/wpscd/wpcp/index.html](http://www.dnr.mo.gov/wpscd/wpcp/index.html)